

Pollution Prevention (P2), or source reduction, is the core environmental ethic of our society.

Saving Money and the Environment

—RON ERIKSEN

Working with **Lincoln Steel**, the Lincoln-Lancaster County Health Department (LLCHD) managed to find an alternative disposal source rather than the landfill for waste steel dust from a Wheelabrator. The amount of waste generated during the process was estimated to be 12,000 pounds per month. The material will be recycled with scrap steel by Alters/Nieden at 8th & "N" Streets in Lincoln.

This process will save Lincoln Steel the cost of tipping fees at the landfill. These fees include \$17 per ton plus a surcharge of \$5 per load for a permit. By recycling the steel, Lincoln Steel will save \$1284 per year in direct disposal costs. In addition, the company saves money by reducing mileage to the landfill and the amount of employee time involved in handling the waste.

The P2 Corner

RISK MANAGEMENT WITH P2

Twenty local businesses recently had to report hazardous materials that they hold on site as part of the 112(r) regulations and the 1990 Clean Air Act Amendments, Risk Management Planning (**RMP**) program. Two additional businesses voluntarily filed reports. Some businesses reduced or eliminated the use and storage of hazardous materials so that they would not be subject to these regulations.

Nearly 92% of the regulated industries received Pollution Prevention (P2) technical assistance from Lincoln-Lancaster County Health Department (**LLCHD**) staff to reduce the amounts of chemicals used and stored. One business eliminated the use of formaldehyde from its production process. Another reduced its use of hydrochloric and nitric acids. In both cases, P2 reduced the risk of accidental release.



COMPUTER DISPOSAL WORKSHOP

—CARRIE HAKENKAMP

WasteCap, with funding from the Nebraska Environmental Trust, will hold a workshop on computer disposal and recycling. The workshop will be held on Wednesday, May 24, 2000, at the Embassy Suites at 11th and "P" streets from 8 a.m. to 12 NOON.

Steve Owen, the Bluff Road superintendent, and Jim Harford, from the Department of Environmental Quality, will outline the State Hazardous Waste regulations. Dan Harrington, from Light Cycle in St. Paul, MN, and Dale Ekart, the UNL Recycling Coordinator, will discuss the recycling of computers. Elaine Gilmore, from the Nebraska Materials Exchange, and Marti Franti, from the Lincoln Public School District, to specify the terms upon which non-profits will accept computers.

The cost of the workshop is \$10 and is free to all INFORM members. Space is limited, and this is a very timely issue, so early registration is advised. Contact Carrie Hakenkamp, director of WasteCap of Lincoln, for more information at 472-0888, 472-2246 fax or wastecap@navix.net.



The LLCHD works closely with state, federal, and local officials and private businesses to carry out RMP activities and material reductions. Businesses received precise geographic information from computer modeling software and Geographic Information System (**GIS**) data.

This information revealed where the greatest risks existed and helped businesses make more informed decisions about locating and securing storage facilities.

Under the federal Right To Know (**RTK**) guidelines, businesses and governmental agencies cooperatively held public information meetings. These meetings gave private citizens information they could use to take an effective and proactive role in protecting their families. For more information, contact John Steinauer at the LLCHD at (402) 441-8037.

GREEN BUSINESS Gets Green Light

—BILL PUGSLEY

The Nebraska Environmental Trust Fund Board approved funding for the Special Waste Program's "Green Business" Grant Project Proposal. The project will receive \$62,000 for the first year of operation, and \$60,000 for each of two years after that. The "Green Business" project will recognize small businesses that meet pollution prevention criteria. Its goals are to:

1. Create a steering committee of trade associations, small business owners, and governmental representatives to develop the project.
2. Develop criteria for a "GREEN BUSINESS" designation (such as being in full compliance and having an environmental management system in place).
3. Develop educational material to help small businesses qualify.
4. Develop incentives (such as a recognition or award).
5. Develop educational opportunities for businesses.
6. Provide technical assistance to businesses.
7. Encourage diversity by assuring that the same educational opportunities are available to minority owned small businesses and that they are invited to participate in the program

Special Waste Staff intend to start the project early this summer. Those interested in serving on the steering committee can volunteer by contacting Bill Pugsley, 441-8020.

KITE



One program offered by the LLCHD Child Care to child care providers and day care centers is **KITE** (Kids In Touch Environmentally). KITE is funded by a grant from EPA. The program offers in-services, work shops, health fairs, and mailings to licensed child care facility staff to teach them the effects of environmental health hazards on children.

This project's mission is to provide educational opportunities and resources for child care providers to help them better understand six environmental topics: Water, Lead, Food, Household Hazardous Waste, Tobacco and Air. Providers will be able to make and teach appropriate environmental decisions to the children in their care.

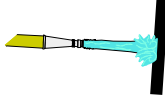
For more information, call E. J. Schumaker, (402) 441-8640.

TIPS.

FOR PAINT STRIPPING OPERATIONS

The United States Navy has enjoyed some success, cost savings, and pollution prevention (P2) benefits by using bicarbonate of soda (or sodium bicarbonate) as a paint stripping medium.

Bicarbonate of soda can be used with water or as a dry medium. In order to reduce dust, the Navy usually mixed the bicarbonate of soda with water. A compressed air system transfers the bicarbonate of soda from a pressure pot to a nozzle. The soda is mixed with a stream of water which reduces heat and dust. The hydraulic action of spraying water aids in removing the paint.



In a web site article, the Navy notes that “workers need to mask the surface of the material being stripped to prevent intrusion of bicarbonate of soda blast media. Blast media decomposes at highly elevated temperatures and may become corrosive if left entrapped within a structure. The solid residue from the wastewater generated from this process can be separated by settling or filtration.”

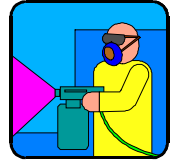
Sodium bicarbonate can also be used dry. However, there is a significant amount of dust created by this process. It will be necessary to contain and monitor the dust to meet air standards. Navy tests have demonstrated that “the dust generated is not an explosive hazard, nor is sodium bicarbonate toxic in this form. However, the airborne particulates generated from the stripping operation can contain toxic elements from the paint being removed” and in the dust itself. These particulates can irritate the respiratory system. Therefore, paint stripping using bicarbonate of soda “should be performed in areas where exhaust particulates can be contained and/or exhaust ventilation system controls are present to remove hazardous airborne metals.”

While slower than chemical paint removal processes, the bicarbonate of soda system is safer because no additional chemicals or solvents are used. Nonetheless, waste can include paint chips, dirt, and grease. Some of these materials may be hazardous or will need to be removed from waste water before disposal. Usually, the

paint chips will prove to be the most hazardous material. Often, filtered waste water can be treated at an industrial waste water treatment facility. It will often be necessary for a business to conduct an analysis of dust or waste water before determining the proper disposal method.

The Navy expresses one caution about the use of bicarbonate of soda; “at temperatures of 140 to 160 degrees Fahrenheit, sodium bicarbonate may convert to sodium carbonate, which is corrosive.” Therefore, bicarbonate of soda paint stripping is sometimes used in conjunction with chemical paint stripping, reducing the amount of solvents and other hazardous materials used and discarded. Further, the bicarbonate of soda process often requires an additional rinse to remove all bicarbonate particles. The process may be unsuitable for parts or vehicles with exposed electronics.

The Navy reported a significant cost savings using bicarbonate of soda paint stripping. In one test conducted at the Lyndon B. Johnson Space Center, Houston, Texas, the military determined that the cost of bicarbonate soda paint stripping was about one-third the cost of chemical paint stripping.



For more information and for a list of vendors, visit this website: http://enviro.nfesc.navy.mil/p2library/cgi-bin/p2h_datasheet.cfm?itemID=83. You can also contact: Mr. Mike Seybold, NADEP—Naval Air Station, North Island, Material Engineering Laboratory, Code 344, San Diego, CA 92135; Phone: (619) 545-9663.

Pollution prevention (P2) is any activity that reduces the amount of any hazardous substance, pollutant or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal. P2 also reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.

Based on: *Pollution Prevention Act of 1990*

<http://www.ci.lincoln.ne.us/city/health/environ/pollu/>

The Ethic is published quarterly by the Lincoln-Lancaster County Health Department and is distributed to Special Waste Permit holders and other businesses in Lincoln and Lancaster County.

For more information or for P2 technical assistance, call 441-8040.

RETURN SERVICE REQUESTED

Lincoln, NE 68510-1514
3140 "N" Street
Lincoln-Lancaster County Health Department

